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Akihiko Tojo

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EXAMINER

DICKERSON, CHAD S

ART UNIT

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2625

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,897	Applicant(s) TOJO, AKIHIKO	
	Examiner CHAD DICKERSON	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 14-20, 51, 55-62, 75 and 76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14-20, 51, 55-62, 75 and 76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/15/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-7, 14-20, 51 and 55-62 have been considered but are moot in view of the new ground(s) of rejection. The Amendment to the claims has necessitated a new ground(s) of rejection. However, the same references of Ito, Rasche, Tanaka, Rissman and Kitagawa are still being applied in the rejection. In the arguments, the Applicant alleges that the applied references do not perform the features of having the detection of a mode at the time when the connection of the image sensing apparatus and external printing device is being established, disclosing a direct printing mode with components connected in the mass storage class mode of USB and two different direct printing modes being automatically detected when the VTR, or camera, and printer are being connected¹. The Examiner respectfully disagrees with this assertion.

When looking at the claim language and Applicant's arguments, the Examiner still is convinced that the Ito '405, Rasche '873 and Kitagawa '021 references perform the feature of the independent claims. When observing the device of Ito, the Examiner realized that the processing speed of control commands and data transfer in the device occurs in micro-seconds. The transfer of image data and control commands from the camera, or VTR, to the printer occurs at efficient speeds and the delay in the system is even used to assist in keeping the transfer of information to the printer as optimal as

¹ See Applicant's Arguments filed 5/22/2009.

possible during the preceding cycle of data transfers². In addition, the connection of the camera to the printing device is automatically detected along with the status of the detected devices³. If a user connects a camera to a printer and activates the direct printing function (DPF) on the camera before or at the moment of connection, with the system operating at such fast cycles, the detection of the DPF of the camera will automatically occur at the moment when the camera is connected to the printer⁴. It is also clear what mode the two components are operating in during the connection. If at the point of connection the user changes the camera to the DPF where the VTR, or camera, controls the printer for copying, the camera automatically detects this operating mode. Moreover, since the rapid operation of the processing system transpires within micro-seconds, this can be considered as the determination of the camera operating in a certain mode with the printer during a time when the connection of the two devices is being established.

Another example of detecting operation modes would be when the printing device monitor receives an instruction at the moment when the camera and printer are connected. Here, the camera would receive this information and allow the images on the camera to be accessed and perform the operation in the mode where the printer controls the process. In order for the camera to realize the printer is accessing the camera for the print data, the camera has to detect it is being accessed in this certain mode and again, since the system operates in micro-seconds to process data, the

² See Ito '405 at col. 13, ll. 18 - col. 14, ll. 11.

³ Id. at col. 5, ll. 1-27.

⁴ Id. at col. 17, ll. 8 - col. 18, ll. 14.

system can process the detection of modes of the camera and printer at the time when the connection is being established between the two devices⁵.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding the assertion of the references not performing a feature of "*connected in Mass Storage Class mode of USB*", the Examiner believes that the combination of Ito and Rasche with the reference of Kitagawa performs the above feature. Like Ito, Kitagawa involves having a computer connected to a digital or video camera. However, the Kitagawa reference specifically discloses having a device connected to a printer that is compliant with the Mass Storage Class mode of USB⁶. With the use of this feature in Kitagawa with the combined references, the Examiner believes that this feature is performed.

Also, when looking at Applicant's arguments regarding this feature, the Applicant appears to have construed the camera for the printer in the system. In Applicant's

⁵ Id. at col. 21, ll. 22-col. 23, ll. 45.

⁶ See Kitagawa '021 at col. 2, ll. 48-59.

arguments, the Applicant stated, *"Applicant note that Ito's "control" of the VTR from the camera as disclosed in the Ito's specification does not necessarily mean that the camera directly accesses the memory of the VTR, as required by amended claim 1"*.

The Examiner would like to first state that the VTR takes the place of the camera in different embodiments of Ito and they do not control each other. In regards to the Applicant's overall argument in this section, the Examiner does not know whether the Applicant is attempting to argue that the printer does not directly access the VTR or admitting that the printer does control the VTR.

Despite this confusion, the Examiner would like to state that in order for the printer to search for image data or command data transfers from the camera, the printer has to send instructions for reading information on a camera's memory for transfer of image data to the printing device. The Rasche reference clearly discloses accessing the memory of an external device from a printer. However, the Examiner would like to pose a question of what does the Applicant deem as accessing the memory of a camera? If the accessing of memory involves simply obtaining information from the external memory of a camera, then Ito could perform this feature alone. Ito allows for commands to be sent to a camera to have a certain image transferred for printing. However, if accessing involves viewing images on another medium in an external device and transferring this viewed information to the printer itself, this would be performed by the Rasche reference as disclosed in the last Office Action.

Regarding the Applicant's last argument, the Examiner would like to state that the claim language states that these control states are automatically detected when the

Art Unit: 2625

camera and printer are connected. However, the claim language does not exclude the fact that Ito performs the detection of these states when the two devices are connected and some instruction is being interpreted by the camera at the same time. As stated earlier, the camera can detect whether it is controlling the printer and being controlled based on the instructions the camera's controller receives and again, since the system is developed to perform real-time transfer of data, the camera can detect a mode of operation in a fast manner while the camera is establishing a connection with the printer⁷. Based on the camera making an automatic determination of the state of control, the system controller of the camera operates accordingly. Therefore, with the system performing the above features of the claims, the Examiner still believes all the claim limitations are performed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 75 and 76 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

⁷ See Ito '405 at col. 5, ll. 15-27.

4. Nowhere in the specification is it clearly and explicitly stated or shown that a *"message for a user to select an image to be printed from a monitor of the external printing apparatus"*. Therefore, because this feature is not implicitly or explicitly seen in the specification, this claim feature is considered as new matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 4, 5, 7, 14, 15, 17, 18, 20, 51, 55 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito '405 (USP 6298405) in view of Rasche '873 (USP 7262873) and Kitagawa '021 (USP 6357021).

Re claim 1: Ito '405 discloses an image sensing apparatus comprising an image sensing unit which converts an optical image of an object into an electric image signal (**i.e. in all cameras, the optical component of the camera is the lens. Through the lens is an optical image and when the picture is captured, that optical image from the lens is converted into an electric signal. It is clear that since Ito '405 uses a camera, the basic functions are performed and therefore, the above feature is performed; see fig. 4; col. 18, lines 45-67 and col. 19, lines 1-7**), and an interface (69) capable of communicating with an external printing apparatus (**i.e. the operating unit (69) is used**

to communicate instructions to the printer (1) as far as printing a image chosen by the user of the camera. The printer (1) is considered as the external processing apparatus; see fig. 4; col. 18, lines 45-67 and col. 19, lines 1-68), and a control unit (70) which transfers the image signal to the external processing apparatus (1) to process the image signal (i.e. the system controller can be used to control the transfer of an image to the printer (1) and to command the printer by instructions from the controller (70); see fig. 4; col. 19, lines 45-68), wherein the image sensing apparatus comprises:

a communication control unit which starts communication between the image sensing apparatus and the external printing apparatus, with the external printing apparatus being a host and the image sensing apparatus being a slave **(i.e. shown in figure 23 is a VTR or camera connected to a printer. The 1349 I/F (13) is analogous to a communication control unit since it is used to start communication between the camera or VTR and the printer (101). The 1349 I/F is used to send control commands to the printer and once the printer receives this information, the printer is uses these commands to perform the instructed process. The printer is able to be controlled by the camera or VTR and therefore, can function as a host in the system. The camera can be used to control the printer through transmitted instructions and therefore, can perform the function of being a slave; see figs. 23 and 26; col. 19, ln 44-64, col. 21, ln 22 – col. 23, ln 45), to transfer the image signal to the external printing apparatus via the interface (i.e. the 1394 I/F is used to transmit sub data for image data to the printer in the**

system. The transfer occurs from the camera or VTR to the printer via the 1394 I/F; see figs. 23 and 26; col. 19, ln 44-64, col. 21, ln 22 – col. 23, ln 45);

a detection unit which automatically detects, upon a connection between the image sensing apparatus and the external printing apparatus is being established (i.e. **in the system, the camera or VTR can send sub data representing commands for the printer to perform, or instructions indicative of the commands. Also, the printer is able to send control instructions to the camera or VTR to control the camera or VTR based on these instructions and this occurs after the same 1394 I/F on the printer communicates with the respective I/F on the camera, or once a connection is established between the two devices; see figs. 23 and 26; col. 19, ln 44-64, col. 21, ln 22 – col. 23, ln 45)**, whether control relation between the image sensing apparatus (102) and the external printing apparatus (101) is a first type of direct printing in which the external printing apparatus and the image sensing apparatus are connected in mode of SB and the external printing apparatus is configured in such a way that the image sensing apparatus can be accessed directly from the external printing apparatus (i.e. **the VTR (102) is a camera with incorporated digital video. This device has the ability to recognize, or detect, when the printer (101) has issued a search for and transfer a designated picture to be transferred or printed. This feature is used when the printer (101) has an operating unit that can output instructions for the VTR. This is an example of the external processing apparatus directly accesses a camera from the printer. The devices in the system are connected using a 1394 high speed serial bus; fig. 23 and 24; col. 21, lines 50-68**

Art Unit: 2625

and col. 22, lines 1-19), or a second type of direct printing in which the external printing apparatus is configured in such a way that processing in the external printing (101) apparatus can be controlled by a controller of the image sensing apparatus (i.e. using the operation unit (10), the VTR (102) can be used to send instructions and control data to the printer (101). The control data can control the process of the printer (101). The VTR has to detect whether it is receiving instructions from a user to performing a controlling function on the printer, or if the instructions received is for the VTR or camera to be controlled; see fig. 23 and 24; col. 21, lines 22-44; col. 22, lines 49-67 and col. 23, lines 1-24), by communication with the external printing apparatus via the interface (10) (i.e. the operating unit (10) is used for entry of instructions to control the VTR (102) by the system controller (11); see fig. 23; col. 21, lines 28-44); and

a processing controller (11) which automatically changes a processing procedure for processing an image in the image sensing apparatus (102) by the external printing apparatus (101) based on the detection **(i.e. the system controller also determines whether direct printing is being performed or not. When in certain modes of printing, the system controller (11) of the VTR (102) processes an image in certain manners. The system controller may allow the printing unit (101) to either access the VTR's images or accept a command from the VTR for printing depending on the type of mode is used. An example of changing a processing procedure for processing an image is shown in columns 21-23. When the image data to be processed is present in a camera or VTR controlling environment, the printer is**

controlled by the instructions of the VTR or camera to perform a printing operation. The printer is not used to search for an image or anything else other than performing the printing operation. When the image is in a printer controlled environment, the printer instructs the camera or VTR to perform the searching for an image and the printer can change a selected image to be printed. The VTR simply performs the instructions from the printer. This is an example of based on the determination of controlling access, the processing procedure for processing an image is changed from having printer input through giving control instructions to the VTR or camera controlling the whole process without any input or instructions from the printer; see figs. 23-25; col. 21, lines 35-68; col. 22, lines 1-67 and col. 23, lines 1-67).

However, Ito '405 fails to teach the external printing apparatus and the image sensing apparatus are connected in mode of USB and the external printing apparatus is configured in such a way that a memory in the image sensing apparatus can be accessed directly from the external printing apparatus.

However, this is well known in the art as evidenced by Rasche '873. Rasche '873 discloses the external printing apparatus and the image sensing apparatus are connected in mode of USB **(i.e. the photoprinter and the camera device can be connected using USB; see col. 3, ll. 14-36)** and the external printing apparatus is configured in such a way that a memory in the image sensing apparatus can be accessed directly from the external printing apparatus **(i.e. like the invention of Ito, Rasche involves a printer communicating directly with a camera. However, in the**

system of Rasche, the photoprinter (30) is able to access data of the computer readable medium (53) on the PC (50) via a communication link (40). The data stored on the computer readable medium (53) can be viewed and printed from the photoprinter. The user may utilize the graphical user interface on the printer to access the photos from the printer on the PC; see figs. 1-3; col. 3, lines 14-50 and col. 5, line 46 – col. 6, line 27).

Therefore, in view of Rasche '873, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of the external printing apparatus and the image sensing apparatus are connected in mode of USB and the external printing apparatus is configured in such a way that a memory in the image sensing apparatus can be accessed directly from the external printing apparatus in order to have a means for accessing digital photographs stored on a computer readable medium (as stated in Rasche '873 col. 1, lines 55-67).

However, the combination of Ito '405 and Rasche '873 fails to specifically teach connected in Mass Storage class of USB.

However, this is well known in the art as evidenced by Kitagawa '021. Kitagawa '021 discloses connected in Mass Storage class of USB **(i.e. in the system, the host computer can be connected to a digital camera. The USB connection is compliant to the USB mass storage class specification. Both Ito '405 and Rasche '873 have an external processing apparatus connected to a camera device, but these references do not specifically state being compliant to the mass storage class specification. Kitagawa '021 cures this one feature that is not specifically**

Art Unit: 2625

disclosed since a computer, considered as the external device, is able to communicate to the digital camera compliant with the USB MSC definition; see col. 2, lines 48-59).

Therefore, in view of Kitagawa '021, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of being connected in Mass Storage class of USB, incorporated in the device of Ito '405, which is modified by the device of Rasche '873, in order to have a device connected to a peripheral device that is compliant with the USB mass storage class definition (as stated in Kitagawa '021).

Re claim 2: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the image sensing apparatus, wherein in a case where the control relation is the second type, the external printing apparatus is controlled based on a predetermined file or command from the image sensing apparatus (102) **(i.e. the operating unit (10) is used for entry of instructions for various operations. One of these operations is involves generating command data for direct printing and this control data is transmitted to the printer (101); see fig. 23; col. 21, lines 35-44 and col. 22, lines 66, 67 and col. 23, lines 1-24).**

Re claim 4: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Art Unit: 2625

Ito '405 discloses the image sensing apparatus, wherein in a case where the control relation is the first type, the processing of the image from the image sensing apparatus (102) can be started based on an operation of a switch provided in the external printing apparatus (101) **(i.e. on the printer (101), instructions may be entered on the operating unit (22). These instructions may be transmitted to the VTR (102) to perform operations, such as searching and transmitting desired pictures to print. The switch in the printer (101) is considered to be the operating unit (22) since the operating unit can cause an action in the VTR (102); see fig. 23-25; see col. 21, lines 50-68 and col. 22, lines 1-18).**

Re claim 5: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the image sensing apparatus, wherein in a case where the control relation is the second type, the external printing apparatus (101) can start the processing of the image from the image sensing apparatus (102) in response to an operation of a switch provided in the image sensing apparatus (102) **(i.e. the operating unit (10) is used for the entry of instructions that can control the VTR (102) and send command data to the printer (101). The operating unit (10) is considered as the switch since the operation of the operating unit (10) can start image processing in the printer (101). Through the command data information from the VTR, the printer may print the image commanded to be printed through the**

Art Unit: 2625

control data; see figs. 23-25; col. 21, lines 35-44 and col. 22, lines 66, 67 and col. 23, lines 1-38).

Re claim 7: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the image sensing apparatus, wherein the external printing apparatus (101) is a printing apparatus, which prints the image from the image sensing apparatus (102) **(i.e. the printing apparatus (101) prints the image from the VTR (102), which is considered the image sensing apparatus since it functions as a camera with incorporated video functions; see fig. 23; col. 21, lines 45-49).**

Re claim 14: Ito '405 discloses a control method for an image sensing apparatus comprising an image sensing unit which converts an optical image of an object into an electric image signal **(i.e. in all cameras, the optical component of the camera is the lens. Through the lens is an optical image and when the picture is captured, that optical image from the lens is converted into an electric signal. It is clear that since Ito '405 uses a camera, the basic functions are performed and therefore, the above feature is performed; see fig. 4; col. 18, lines 45-67 and col. 19, lines 1-7),** and an interface (69) capable of communicating with an external printing apparatus **(i.e. the operating unit (69) is used to communicate instructions to the printer (1) as far as printing a image chosen by the user of the camera. The printer (1) is**

considered as the external processing apparatus; see fig. 4; col. 18, lines 45-67 and col. 19, lines 1-68), the control method comprising:

starting communication between the image sensing apparatus and the external printing apparatus, with the external printing apparatus being a host and the image sensing apparatus being a slave (**i.e. shown in figure 23 is a VTR or camera connected to a printer. The 1349 I/F (13) is analogous to a communication control unit since it is used to start communication between the camera or VTR and the printer (101). The 1349 I/F is used to send control commands to the printer and once the printer receives this information, the printer is uses these commands to perform the instructed process. The printer is able to be controlled by the camera or VTR and therefore, can function as a host in the system. The camera can be used to control the printer through transmitted instructions and therefore, can perform the function of being a slave; see figs. 23 and 26; col. 19, ln 44-64, col. 21, ln 22 – col. 23, ln 45), to transfer the image signal to the external printing apparatus via the interface (i.e. the 1394 I/F is used to transmit sub data for image data to the printer in the system. The transfer occurs from the camera or VTR to the printer via the 1394 I/F; see figs. 23 and 26; col. 19, ln 44-64, col. 21, ln 22 – col. 23, ln 45);**

automatically detecting, upon a connection between the image sensing apparatus and the external apparatus is being established (**i.e. in the system, the camera or VTR can send sub data representing commands for the printer to perform, or instructions indicative of the commands. Also, the printer is able to**

send control instructions to the camera or VTR to control the camera or VTR based on these instructions and this occurs after the same 1394 I/F on the printer communicates with the respective I/F on the camera, or once a connection is established between the two devices; see figs. 23 and 26; col. 19, ln 44-64, col. 21, ln 22 – col. 23, ln 45), whether control relation between the image sensing apparatus (102) and the external printing apparatus (101) is a first type of direct printing in which the external printing apparatus and the image sensing apparatus are connected in mode of SB and the external printing apparatus is configured in such a way that the image sensing apparatus can be accessed directly from the external printing apparatus (i.e. the VTR (102) is a camera with incorporated digital video. This device has the ability to recognize, or detect, when the printer (101) has issued a search for and transfer a designated picture to be transferred or printed. This feature is used when the printer (101) has an operating unit that can output instructions for the VTR. This is an example of the external processing apparatus directly accesses a camera from the printer. The devices in the system are connected using a 1394 high speed serial bus; fig. 23 and 24; col. 21, lines 50-68 and col. 22, lines 1-19), or a second type of direct printing in which the external printing apparatus is configured in such a way that processing in the external printing apparatus (101) can be controlled by a controller of the image sensing apparatus (102) (i.e. using the operation unit (10), the VTR (102) can be used to send instructions and control data to the printer (101). The control data can control the process of the printer (101). The VTR has to detect whether it is receiving instructions from a user to performing a

controlling function on the printer, or if the instructions received is for the VTR or camera to be controlled; see fig. 23 and 24; col. 21, lines 22-44; col. 22, lines 49-67 and col. 23, lines 1-24), by communication with the external printing apparatus via the interface (10) (i.e. the operating unit (10) is used for entry of instructions to control the VTR (102) by the system controller (11); see fig. 23; col. 21, lines 28-44); and

automatically changing a processing procedure for processing an image in the image sensing apparatus (102) by the external printing apparatus (101) based on the determination (i.e. the system controller also determines whether direct printing is being performed or not. When in certain modes of printing, the system controller (11) of the VTR (102) processes an image in certain manners. The system controller may allow the printing unit (101) to either access the VTR's images or accept a command from the VTR for printing depending on the type of mode is used. An example of changing a processing procedure for processing an image is shown in columns 21-23. When the image data to be processed is present in a camera or VTR controlling environment, the printer is controlled by the instructions of the VTR or camera to perform a printing operation. The printer is not used to search for an image or anything else other than performing the printing operation. When the image is in a printer controlled environment, the printer instructs the camera or VTR to perform the searching for an image and the printer can change a selected image to be printed. The VTR simply performs the instructions from the printer. This is an example of based on the determination of controlling access, the processing procedure for processing an image is changed

from having printer input through giving control instructions to the VTR or camera controlling the whole process without any input or instructions from the printer; see figs. 23-25; col. 21, lines 35-68; col. 22, lines 1-67 and col. 23, lines 1-67).

However, Ito '405 fails to teach the external printing apparatus and the image sensing apparatus are connected in mode of USB and the external printing apparatus is configured in such a way that a memory in the image sensing apparatus can be accessed directly from the external printing apparatus.

However, this is well known in the art as evidenced by Rasche '873. Rasche '873 discloses the external printing apparatus and the image sensing apparatus are connected in mode of USB **(i.e. the photoprinter and the camera device can be connected using USB; see col. 3, ll. 14-36)** and the external printing apparatus is configured in such a way that a memory in the image sensing apparatus can be accessed directly from the external printing apparatus **(i.e. like the invention of Ito, Rasche involves a printer communicating directly with a camera. However, in the system of Rasche, the photoprinter (30) is able to access data of the computer readable medium (53) on the PC (50) via a communication link (40). The data stored on the computer readable medium (53) can be viewed and printed from the photoprinter. The user may utilize the graphical user interface on the printer to access the photos from the printer on the PC; see figs. 1-3; col. 3, lines 14-50 and col. 5, line 46 – col. 6, line 27).**

Therefore, in view of Rasche '873, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of the external printing apparatus and the image sensing apparatus are connected in mode of USB and the external printing apparatus is configured in such a way that a memory in the image sensing apparatus can be accessed directly from the external printing apparatus in order to have a means for accessing digital photographs stored on a computer readable medium (as stated in Rasche '873 col. 1, lines 55-67).

However, the combination of Ito '405 and Rasche '873 fails to specifically teach connected in Mass Storage class of USB.

However, this is well known in the art as evidenced by Kitagawa '021. Kitagawa '021 discloses connected in Mass Storage class of USB **(i.e. in the system, the host computer can be connected to a digital camera. The USB connection is compliant to the USB mass storage class specification. Both Ito '405 and Rasche '873 have an external processing apparatus connected to a camera device, but these references do not specifically state being compliant to the mass storage class specification. Kitagawa '021 cures this one feature that is not specifically disclosed since a computer, considered as the external device, is able to communicate to the digital camera compliant with the USB MSC definition; see col. 2, lines 48-59).**

Therefore, in view of Kitagawa '021, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of being connected in Mass Storage class of USB, incorporated in the device of Ito '405, which is modified

Art Unit: 2625

by the device of Rasche '873, in order to have a device connected to a peripheral device that is compliant with the USB mass storage class definition (as stated in Kitagawa '021).

Re claim 15: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the control method, wherein in a case where the control relation is the second type, the external printing apparatus (101) is controlled based on a predetermined file or command from the image sensing apparatus (102) **(i.e. the operating unit (10) is used for entry of instructions for various operations. One of these operations is involves generating command data for direct printing and this control data is transmitted to the printer (101); see fig. 23; col. 21, lines 35-44 and col. 22, lines 66, 67 and col. 23, lines 1-24).**

Re claim 17: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the control method, wherein in a case where the control relation is the first type, the processing of the image from the image sensing apparatus (102) can be started in response to an operation of a switch provided in the external printing apparatus (101) **(i.e. on the printer (101), instructions may be entered on the operating unit (22). These instructions may be transmitted to the VTR (102) to perform operations, such as searching and transmitting desired pictures to print.**

The switch in the printer (101) is considered to be the operating unit (22) since the operating unit can cause an action in the VTR (102); see fig. 23-25; see col. 21, lines 50-68 and col. 22, lines 1-18).

Re claim 18: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the control method, wherein in a case where the control relation is the second type, the external printing apparatus (101) can start the processing of the image from the image sensing apparatus (102) in response to an operation of a switch provided in the image sensing apparatus (102) **(i.e. the operating unit (10) is used for the entry of instructions that can control the VTR (102) and send command data to the printer (101)). The operating unit (10) is considered as the switch since the operation of the operating unit (10) can start image processing in the printer (101). Through the command data information from the VTR, the printer may print the image commanded to be printed through the control data; see figs. 23-25; col. 21, lines 35-44 and col. 22, lines 66, 67 and col. 23, lines 1-38).**

Re claim 20: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the control method, wherein the external processing apparatus is a printing apparatus (101), which prints the image from the image sensing apparatus (102) **(i.e. the printing apparatus (101) prints the image from the VTR (102), which**

Art Unit: 2625

is considered the image sensing apparatus since it functions as a camera with incorporated video functions; see fig. 23; col. 21, lines 45-49).

Re claim 51: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses a computer readable storage medium storing a program for implementing the control method described in claim 14 **(i.e. the invention has a storage medium which is stored a software program code that implements the functions of the invention; see col. 29, lines 5-35).**

Re claim 55: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

However, Ito '405 fails to specifically teach the image sensing apparatus according to claim 1, wherein the first type is the control relation in which the external printing apparatus is capable of accessing to the memory of the image sensing apparatus but is not capable of accessing to the controller of the image sensing apparatus.

However, this is well known in the art as evidenced by Rasche '873. Rasche '873 discloses wherein the first type is the control relation in which the external printing apparatus is capable of accessing to the memory of the image sensing apparatus but is not capable of accessing to the controller of the image sensing apparatus **(i.e. in the**

system, the photoprinter is used to access the computer readable medium in the PC in the system and not the CPU of the PC; see figs. 1-3; col. 3, lines 14-50 and col. 5, line 46 - col. 6, line 27).

Therefore, in view of Rasche '873, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein the first type is the control relation in which the external printing apparatus is capable of accessing to the memory of the image sensing apparatus but is not capable of accessing to the controller of the image sensing apparatus incorporated in the device of Ito '405, as modified by Rasche '873, in order to have a means for accessing digital photographs stored on a computer readable medium (as stated in Rasche '873 col. 1, lines 55-67).

Re claim 60: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

However, Ito '405 fails to teach the control method according to claim 14, wherein the first type is the control relation in which the external printing apparatus is capable of accessing to the memory of the image sensing apparatus but is not capable of accessing to the controller of the image sensing apparatus.

However, this is well known in the art as evidenced by Rasche '873. Rasche '873 discloses wherein the first type is the control relation in which the external printing apparatus is capable of accessing to the memory of the image sensing apparatus but is not capable of accessing to the controller of the image sensing apparatus **(i.e. in the**

system, the photoprinter is used to access the computer readable medium in the PC in the system and not the CPU of the PC; see figs. 1-3; col. 3, lines 14-50 and col. 5, line 46 - col. 6, line 27).

Therefore, in view of Rasche '873, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of wherein the first type is the control relation in which the external printing apparatus is capable of accessing to the memory of the image sensing apparatus but is not capable of accessing to the controller of the image sensing apparatus incorporated in the device of Ito '405, as modified by Rasche '873, in order to have a means for accessing digital photographs stored on a computer readable medium (as stated in Rasche '873 col. 1, lines 55-67).

7. Claims 3, 16, 57 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito '405, as modified by Rasche '873, as applied to claims 1 and 14 above, and further in view of Tanaka '169 (US Pub No 2003/0007169).

Re claim 3: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 teaches the control method, wherein in a case where the control relation is the first type, a display unit (8) of the image sensing apparatus (102) **(i.e. similar to the digital camera in Ito '405, the VTR (102) uses the EVF as a display unit; see fig. 4 and 23; col. 18, lines 45-56 and col. 24, lines 13-19).**

However, Ito '405 fails to teach a display unit of the image sensing apparatus is switched to an energy-saving mode.

However, this is well known in the art as evidenced by Tanaka '169. Tanaka '169 discloses a display unit of the image sensing apparatus is switched to an energy-saving mode **(i.e. in paragraph [0070], the image pickup device, or the camera, is placed in a state in which the power consumption of the digital camera is reduced to save power, considered as a energy-saving mode; see paragraph [0070])**.

Therefore, in view of Tanaka '169, it would have been obvious to one of ordinary skill at the time the invention was made to have a display unit of the image sensing apparatus is switched to an energy-saving mode incorporated in the device of Ito '405, as modified by the device of Rasche '873, in order to have the power consumption of the digital camera reduced to save power (as stated in Tanaka '169 paragraph [0070]).

Re claim 16: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 teaches the control method, wherein in a case where the control relation is the first type, a display unit (8) of the image sensing apparatus (102) **(i.e. similar to the digital camera in Ito '405, the VTR (102) uses the EVF as a display unit; see fig. 4 and 23; col. 18, lines 45-56 and col. 24, lines 13-19)**.

However, Ito '405 fails to teach a display unit of the image sensing apparatus is switched to an energy-saving mode.

However, this is well known in the art as evidenced by Tanaka '169. Tanaka '169 discloses a display unit of the image sensing apparatus is switched to an energy-saving mode **(i.e. in paragraph [0070], the image pickup device, or the camera, is placed in a state in which the power consumption of the digital camera is reduced to save power, considered as a energy-saving mode; see paragraph [0070])**.

Therefore, in view of Tanaka '169, it would have been obvious to one of ordinary skill at the time the invention was made to have a display unit of the image sensing apparatus is switched to an energy-saving mode incorporated in the device of Ito '405, as modified by the device of Rasche '873, in order to have the power consumption of the digital camera reduced to save power (as stated in Tanaka '169 paragraph [0070]).

Re claim 57: The teachings of Ito '405, as modified by Rasche '873 and Kitagawa '021, and further in view of Tanaka '169 are disclosed above.

However, Ito '405, as modified by Rasche '873, and further in view of Tanaka '169 fails to specifically teach the image sensing apparatus according to claim 3, wherein, in the energy-saving mode, the display unit is turned off or is controlled so as not to display any image.

However, this is well known in the art as evidenced by Tanaka '169. Tanaka '169 discloses wherein, in the energy-saving mode, the display unit is turned off or is controlled so as not to display any image **(i.e. in the system, the display on the back of the image pickup device, or camera, is turned off; see paragraph [0070])**.

Therefore, in view of Tanaka '169, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein, in the energy-saving mode, the display unit is turned off or is controlled so as not to display any image incorporated in the device of Ito '405, as modified by Rasche '873, in order to have the power consumption of the digital camera reduced to save power (as stated in Tanaka '169 paragraph [0070]).

Re claim 62: The teachings of Ito '405, as modified by Rasche '873 and Kitagawa '021, and further in view of Tanaka '169 are disclosed above.

However, Ito '405 in view of Rasche '873 fails to teach the control method according to claim 16, wherein, in the energy-saving mode, the display unit is turned off or is controlled so as not to display any image.

However, this is well known in the art as evidenced by Tanaka '169. Tanaka '169 discloses wherein, in the energy-saving mode, the display unit is turned off or is controlled so as not to display any image **(i.e. in the system, the display on the back of the image pickup device, or camera, is turned off; see paragraph [0070])**.

Therefore, in view of Tanaka '169, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein, in the energy-saving mode, the display unit is turned off or is controlled so as not to display any image incorporated in the device of Ito '405, as modified by Rasche '873, in order to have the

Art Unit: 2625

power consumption of the digital camera reduced to save power (as stated in Tanaka '169 paragraph [0070]).

8. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito '405, as modified by Rasche '873, as applied to claims 1 and 14 above, and further in view of Rissman '743 (USP 6552743).

Re claim 6: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 teaches the image sensing apparatus, wherein in a case where the control relation is the first type, the external processing apparatus comprises a display unit (26) which displays (i.e. the display unit on the printer (101) displays messages regarding the statuses of the printer and the VTR (102); see fig. 24; col. 21, lines 50-68 and col. 22, lines 1-18).

However, Ito '405 fails to teach comprises a display unit which displays the image from the image sensing apparatus.

However, this is well known in the art as evidenced by Rissman '743. Rissman '743 discloses the external processing apparatus comprises a display unit which displays the image from the image sensing apparatus (i.e. a user interface and a display device integrated into the digital-camera ready printer allow a user to view an electronic image; see fig. 3; col. 2, lines 52-63).

Therefore, in view of Rissman '743, it would have been obvious to one of ordinary skill at the time the invention was made to have the external processing apparatus comprises a display unit which displays the image from the image sensing apparatus incorporated in the device of Ito '405, as modified by the device of Rasche '873, in order to view electronic images on the printer (as stated in Rissman '743 col. 2, lines 52-63).

Re claim 19: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 teaches the control method, wherein in a case where the control relation is the first type, the external processing apparatus comprises a display unit (26) which displays (i.e. the display unit on the printer (101) displays messages regarding the statuses of the printer and the VTR (102); see fig. 24; col. 21, lines 50-68 and col. 22, lines 1-18).

However, Ito '405 fails to teach comprises a display unit which displays the image from the image sensing apparatus.

However, this is well known in the art as evidenced by Rissman '743. Rissman '743 discloses the external processing apparatus comprises a display unit which displays the image from the image sensing apparatus (i.e. a user interface and a display device integrated into the digital-camera ready printer allow a user to view an electronic image; see fig. 3; col. 2, lines 52-63).

Therefore, in view of Rissman '743, it would have been obvious to one of ordinary skill at the time the invention was made to have the external processing apparatus comprises a display unit which displays the image from the image sensing apparatus incorporated in the device of Ito '405, as modified by the device of Rasche '873, in order to view electronic images on the printer (as stated in Rissman '743 col. 2, lines 52-63).

9. Claims 75 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito '405, as modified by Rasche '873 and Kitagawa '021, as applied to claims 1 and 14 above, and further in view of Shiohara '553 (USP 6618553).

Re claim 75: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the image sensing apparatus according to claim 1 further comprising:

a display unit which displays an image **(i.e. in the system of Ito, the VTR or camera can be used to display an image or message; see col. 16, ll. 16-23)**; and

a control unit which controls the display unit so as to display to select an image to be printed **(i.e. in the system, the VTR, or camera, is able to display an image that will be printed through a direct printing function; see col. 16, ll. 16-23)** from a monitor of the external printing apparatus in a case where the detection unit detects the first type **(i.e. in the system, the printer is able to print image information that was requested from the monitor of the printing device or displayed on the camera's**

display unit. The user prints the image data selected from monitor of the printing device. Once the camera accepts the commands from the printer, the detecting unit in the camera determines what mode of operation the camera will be working in; see col. 21, ll. 34-col. 22, ll. 48), and

controls the display unit so as to make the user select an image to be printed from the display unit in a case where the detection unit detects the second type (**i.e. in the direct printing mode where the camera controls the process, the camera detects an instruction from the user into the camera and the printer is sent image data for printing based on the camera's command; see col. 19, ll. 44-col. 20, ll. 49).**

However, the reference of Ito '405 fails to specifically teach a control unit which controls the display unit so as to display a message for a user to select an image to be printed.

However, this is well known in the art as evidenced by Shiohara '553. Shiohara '553 discloses a control unit which controls the display unit so as to display a message for a user to select an image to be printed (**i.e. like the device of Ito, Shiohara discloses a camera being connected to a printing for direct printing (same field of endeavor). However, this reference discloses a message to a user on the camera's display to select from the other images for printing; see col. 12, ll. 8-44).**

Therefore, in view of Shiohara '553, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of a control unit which controls the display unit so as to display a message for a user to select an image to be printed, incorporated in the device of Ito '405, as modified by the features of

Rasche '873 and Kitagawa '021, in order to prompt a user to select a desired image (as stated in Shiohara '553 col. 12, ll. 11-14).

Re claim 76: The teachings of Ito '405 in view of Rasche '873 and Kitagawa '021 are disclosed above.

Ito '405 discloses the control method according to claim 1, wherein the image sensing apparatus further comprises a display unit which displays an image (**i.e. in the system of Ito, the VTR or camera can be used to display an image or message; see col. 16, ll. 16-23**), the control method further comprising:

controlling the display unit so as to display to select an image to be printed (**i.e. in the system, the VTR, or camera, is able to display an image that will be printed through a direct printing function; see col. 16, ll. 16-23**) from a monitor of the external printing apparatus in a case where the detection unit detects the first type (**i.e. in the system, the printer is able to print image information that was requested from the monitor of the printing device or displayed on the camera's display unit. The user prints the image data selected from monitor of the printing device. Once the camera accepts the commands from the printer, the detecting unit in the camera determines what mode of operation the camera will be working in; see col. 21, ll. 34-col. 22, ll. 48**); and

controlling the display unit so as to make the user select an image to be printed from the display unit in a case where the detection unit detects the second type (**i.e. in the direct printing mode where the camera controls the process, the camera**

detects an instruction from the user into the camera and the printer is sent image data for printing based on the camera's command; see col. 19, ll. 44-col. 20, ll. 49).

However, the reference of Ito '405 fails to specifically teach controlling the display unit so as to display a message for a user to select an image to be printed.

However, this is well known in the art as evidenced by Shiohara '553. Shiohara '553 discloses controlling the display unit so as to display a message for a user to select an image to be printed **(i.e. like the device of Ito, Shiohara discloses a camera being connected to a printing for direct printing (same field of endeavor).**

However, this reference discloses a message to a user on the camera's display to select from the other images for printing; see col. 12, ll. 8-44).

Therefore, in view of Shiohara '553, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of controlling the display unit so as to display a message for a user to select an image to be printed, incorporated in the device of Ito '405, as modified by the features of Rasche '873 and Kitagawa '021, in order to prompt a user to select a desired image (as stated in Shiohara '553 col. 12, ll. 11-14).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2625

11. Shiraiwa (US Pub No 2002/0105678) discloses a feature where the camera can change its mode of operation from being a camera that directs a printer to print an image.

12. Morimoto (USP 6774935) discloses a system where a camera can be a master unit controlling other units, such as a printer, and a unit that is being controlled or access.

13. Ogawa '506 (USP 6603506) discloses a camera connected to a printer and the system detects the type of mode the printer operates in at the connection of the two devices (see figure 3, col. 4, ll. 36-53).

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAD DICKERSON whose telephone number is (571)270-1351. The examiner can normally be reached on 9:30-6:00pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D./
/Chad Dickerson/
Examiner, Art Unit 2625

/Twyler L. Haskins/
Supervisory Patent Examiner, Art Unit 2625